

Claims

I claim:

1. A method to decrease an aldehyde content of a polyester that comprises incorporating into the polyester an effective amount of an additive that is capable of catalyzing a hydride-transfer reaction between an organic donor molecule and said aldehyde.
2. The method of claim 1, wherein the hydride transfer reaction is between an alcohol and said aldehyde.
3. The method of claim 1, wherein the hydride transfer reaction is between an aldehyde or ketone and said aldehyde.
4. The method of claim 1, wherein the additive is a hydrous metal oxide.
5. The method of claim 4, wherein the additive is a hydrous zirconium oxide.
6. The method of claim 1, wherein the additive is incorporated into molten polyester.
7. The method of claim 1, wherein the polyester is a poly(ethylene terephthalate) homopolymer or copolymer.
8. The method of claim 1, wherein the additive is present in the polyester at a concentration between about 1 and 2000 ppm.
9. The method of claim 1, wherein the additive is present in the polyester at a concentration between about 10 and 500 ppm.
10. The method of claim 1, wherein the additive has a particle size less than about 30 microns.

11. The method of claim 1, wherein the additive has a particle size less than about 5 microns.
12. The method of claim 1, wherein the polyester is molded into a solid article.
13. The method of claim 12, wherein the solid article is a container.
14. The method of claim 1, wherein the additive has a surface area of about 200-500 m²/g.
15. The method of claim 1 wherein the organic donor molecule is naturally present in the polyester.
16. The method of claim 1 wherein the additive is a hydrous metal oxide further comprising lithium, sodium, potassium, rubidium, magnesium, calcium, strontium, yttrium, lanthanum, cerium, neodymium, nickel, copper, or iron ions.
17. A method of forming a polyester container for storing food or beverage comprising combining an additive selected from hydrous metal oxides and a molten poly(ethylene terephthalate) homopolymer or copolymer to form a treated material and molding said treated material to form said container.
18. The method of claim 17 wherein said additive is a hydrous zirconium oxide.
19. The method of claim 17 wherein said additive is present in the poly(ethylene terephthalate) at a concentration between about 10 and 2000 ppm.
20. A polyester composition having an improved flavor retaining property, comprised of dicarboxylic acid units and diol units, and including additive selected from hydrous zirconium oxide, hydrous niobium oxide, hydrous tantalum oxide,

hydrous tin oxide, hydrous aluminum oxide, and hydrous titanium oxide, said additive being present at a concentration between about 10 and 2000 ppm.

21. A container for food or beverage products, the container being comprised of a polyester including an additive, said additive being selected from hydrous zirconium oxide, hydrous niobium oxide, and hydrous tantalum oxide, and being present at a concentration between about 10 and 2000 ppm.